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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,084

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EXAMINER

WU, QING YUAN

ART UNIT

PAPER NUMBER

2194

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/763,084	<b>Applicant(s)</b> DAS ET AL.	
	<b>Examiner</b> QING-YUAN WU	<b>Art Unit</b> 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-24 are pending in the application.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 11-12 are is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification lacks the corresponding structure of means for performing a hash algorithm/a modulo reduction transformation. More specifically, the limitation was not disclosed in the specification in a way that one skilled in the art will understand what structure (or material or acts) will perform the recited function. See MPEP 2181.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 8 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following terms lack antecedent basis:

i. As to claims 8 and 24, the term “the same event queue” and “the plurality of event queues” lack antecedent basis. For examination purpose claim 8 will be treated as dependent on claim 6 and claim 24 dependent on claim 22 in light of the claim hierarchy of claims 14 and 16 with similar claim limitations.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to software alone without claiming associated computer hardware required for execution. Claims 10-16 are dependent claims of claim 9 but failed to remedy the deficiency in providing supporting hardware for claim 9, therefore they are rejected for the same reason.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2194

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 6-11, 14-19 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA), in view of Pagliari et al. (hereafter Pagliari) (U.S. PG Publication 2003/0144866).

10. As to claim 1, AAPA teaches the invention as claimed including a method in a data processing system for sequencing of business objects in preparation for parallel processing in application integration, said method comprising the steps of:

receiving a plurality of business objects, wherein each business object is associated with an application;

allocating each business object to a data set of a plurality of data sets associated with the business object such that the data set contains all business objects associated with the application [Pages 2-3, paragraph 4].

11. AAPA does not specifically teach partitioning the data sets into a plurality of groups such that each group contains one or more data sets, wherein there are less groups than there are data sets. However, Pagliari teaches gathering various business data, compiled the data into sets of data relating to certain credit dispute and sorting the data sets into various queues based on logical rules [pg. 5, paragraph 80] and less queues than there are data sets [pg. 4, paragraph 69; Fig. 21]. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to have modified the single queue limitation of AAPA with multiple queues to achieve the predictable result of handling more events via a larger number of queues.

12. As to claim 2, AAPA as modified teaches the invention substantially as claimed including wherein the plurality of business objects are received at an interface to a business integration application [AAPA, pg. 2, lines 17-24].

13. As to claim 3, AAPA as modified does not specifically teach wherein the step of allocating includes the step of performing a hash algorithm on an application number associated with a business object. However, hash algorithm such as the use of hash function/hash table in generating hash values are well known in the art of data management and one of ordinary in the art would be motivated to use a hash algorithm because hashing can speedup the lookup of data records.

14. As to claim 6, AAPA as modified teaches the invention substantially as claimed including wherein the step of storing each group of the plurality of groups in a separate one of a plurality of event queues [Pagliari, pg. 5, paragraph 80; Fig. 21].

15. As to claim 7, AAPA as modified teaches the invention substantially as claimed including wherein the number of groups is equal to a number of event queues of the plurality of event queues [Pagliari, pg. 5, paragraph 80; Fig. 21].

16. As to claim 8, AAPA as modified teaches the invention substantially as claimed including processing business objects contained within the same event queue of the plurality of event queues in series and business objects contained in different event queues of the plurality of event queues in parallel [Pagliari, pg. 4, paragraphs 69-72; Fig. 21].

17. As to claims 9-11 and 14-16, these claims are rejected for the same reason as claims 1-3 and 6-8 above. (Note: Prior art rejection with respect to apparatus claims only apply to the structure of the apparatus claims, however, no structure were disclosed in the apparatus claims (see 35 USC § 101 rejection above), in the interest of compact prosecution, the limitations in the claims are nonetheless being considered. In addition, applicant is directed to MPEP 2114 regarding the interpretation of apparatus claims).

18. As to claims 17-19 and 22-24, these claims are rejected for the same reason as claims 1-3 and 6-8 above.

19. Claims 4-5, 12-13 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Pagliari as applied to claims 1, 9 and 17 above, in view of Garfinkle et al. (hereafter Garfinkle) (U.S. Patent 6,570,640).

20. As to claim 4, AAPA as modified does not specifically teach wherein the step of partitioning includes the step of performing a modulo reduction transformation on each data set. However, Garfinkle teaches using modulo reduction to choose which partition/directory to use in

Art Unit: 2194

storing data [col. 6, lines 7-9 and 33-35; Figs. 3A-3B]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the queuing and storing data of AAPA as modified with the teaching of Garfinkle, because the teaching of Garfinkle can further enhance the data management capabilities of AAPA as modified by sorting data files into a limited number of storage locations by assigning files meeting a certain criteria (i.e. data files processed on the same day sorted into the same directory) into the specific storage location.

21. As to claim 5, this claim is rejected for the same reason as claim 4 above.
22. As to claims 12-13, these claims are rejected for the same reason as claims 4-5 above.
23. As to claims 20-21, these claims are rejected for the same reason as claims 4-5 above.
24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,989,199 to Hong et al. teach sorting sequential bursts of data based on a primary key and send it to a queue of a plurality of queues in a Multi-thread Shared Memory message Queue Buffer to be further sorted by a Semi-Merge Sort Module.

U.S. PG publication 2005/0076059 to Nomura et al. teaches extracting and queuing business events.



“An Early Look at Application Considerations Involved with MQSeries” to International Technical Support Organization teaches message queuing.

“WebSphere MQ in a z/OS Parallel Sysplex Environment” to Deborin et al.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to QING-YUAN WU whose telephone number is (571)272-3776. The examiner can normally be reached on 8:30am-6:00pm Monday-Thursday and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/QING-YUAN WU/  
Examiner, Art Unit 2194

/Thomson D. William/  
Supervisory Patent Examiner, Art Unit 2194